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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/223,274 12/30/98 LEE

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EXAMINER

MALINOWSKI, W

ART UNIT

PAPER NUMBER

2164

DATE MAILED:

03/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/223,274

Applicant(s)

LEE ET AL.

Examiner

Walter Malinowski

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimaki et al. (Fujimaki), U.S. Patent No. 6,191,837, in view of Ogawa et al. (Ogawa), Japanese Kokai No. 57-613, or Kondo et al. (Kondo), Japanese Kokai No. 3-69917.

Fujimaki discloses first and second electrodes on a first panel and spacers, but does not disclose spacers which align the liquid crystal in a fairly regular manner.

Ogawa discloses a liquid crystal display comprising a first and a second panels spaced apart from each other and having a first and a second electrode 1, respectively, separated from each other which generate electric field by applying voltage; a liquid crystal layer 4 interposed between the first and second panels 2, wherein the spacers align liquid crystal molecules near the spacers in a substantially regular manner with respect to surfaces of the spacers (figures 2 and 3).

Kondo discloses a liquid crystal display comprising a first and a second panels 3 and 4 spaced apart from each other and having a first and a second electrode 5 and 6, respectively, separated from each other which generate electric field by applying

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voltage; a liquid crystal layer 9 interposed between the first and second panels 3 and 4, wherein the spacers 10a and 10b align liquid crystal molecules near the spacers in a substantially regular manner with respect to surfaces of the spacers (see figures 1-3).

Polarizers are well known in the liquid crystal display art.

As to Claim 3, to heighten contrast and make a better display image, it would have been obvious to use polarizers in the device of the combination of Fujimaki and Ogawa.

As to Claim 4, Ogawa shows the spacers align the liquid crystal molecules near the spacers substantially parallel to surfaces of the spacers (figure 2).

As to Claim 5, Ogawa shows the spacers align the liquid crystal molecules near the spacers substantially perpendicular to the surfaces of the spacers (figure 3).

Kondo discloses a liquid crystal display having spacers which orient the liquid crystal molecules in a regular fashion and having polarizers 13 and 14.

As to Claim 3, crossed polarizers are well known in the liquid crystal display art and, to improve contrast, it would have been obvious to use them.

As to Claim 4, Kondo shows the spacers align the liquid crystal molecules near the spacers substantially parallel to surfaces of the spacers (figures 1 and 2).

As to Claim 5, Kondo shows the spacers align the liquid crystal molecules near the spacers substantially perpendicular to the surfaces of the spacers (figures 1 and 3).

Response to Arguments

Applicant's arguments filed December 22, 2000, have been fully considered but they are not persuasive.

Fujimaki has been newly cited to address the limitations of the amended claims. The combination of Fujimaki and Ogawa or Kondo makes obvious all claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Malinowski whose telephone number is (703) 308-3172. The examiner can normally be reached on M-F 8:00 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (703) 308-1065. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5401 for regular communications and (703) 308-5355 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

wjm
February 28, 2001

Walter Malinowski

Walter J. Malinowski
Primary Examiner
Technology Center 2800